

Express Mail No.: EV 603557275 US

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IN THE UNITED STATES PATENT  
AND TRADEMARK OFFICE

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Application Number: 10/522,320  
Filed: January 24, 2005  
Applicants: John L. Schenk and Allison C. Lindsey  
Title: Sperm Cell Process System  
TC/A.U:  
Examiner:  
Attorney Docket: XY-Optimum-NP-US  
Customer No. 33549

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**LETTER OF TRANSMITTAL**

To: Mail Stop PCT  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

In response to the Notification of Missing Requirements Under 35 U.S.C. 371 in the United States Designated/Elected Office dated August 15, 2005, enclosed with this correspondence are the following documents:

1. a Response to Notification of Missing Requirements Under 35 U.S.C. 371 in the United States Designated/Elected Office along with Exhibits 1-3;
2. this Letter of Transmittal; and
3. a Certificate of Express Mailing for each document and return postcard.

Please confirm receipt of the documents by applying your date stamp on the enclosed postcard and returning it to me.

**Please address all future correspondence to: Santangelo Law Offices, P.C., 125 South Howes, Third Floor, Fort Collins, CO 80521.**

I have this 11 day of October, 2005, either myself personally or through my direction of staff at this office, deposited all of the items in the above letter of transmittal with the United States Postal Service as "Express Mail", postage prepaid, in an envelope addressed to: Mail Stop PCT, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Dated this 11 day of October, 2005.

Respectfully Submitted,  
SANTANGELO LAW OFFICES, P.C.

By: Nicole A. Ressue  
Nicole A. Ressue  
Attorney for Applicant  
PTO No. 48,665  
125 South Howes, Third Floor  
Fort Collins, Colorado 80521  
(970)224-3100

Express Mail No.: EV 603557275 US

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IN THE UNITED STATES PATENT  
AND TRADEMARK OFFICE

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Application Number: 10/522,320  
Filed: January 24, 2005  
Applicants: John L. Schenk and Allison C. Lindsey  
Title: Sperm Cell Process System  
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Examiner:  
Attorney Docket: XY-Optimum-NP-US  
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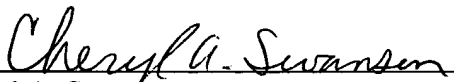
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**CERTIFICATE OF EXPRESS MAILING**

I, Cheryl A. Swanson, hereby certify to the truth of the following items:

1. I am an employee of Santangelo Law Offices, P.C., 125 South Howes, Third Floor, Fort Collins, Colorado 80521.
2. I have this day deposited the attached Letter of Transmittal with the United States Postal Service as "Express Mail" for mailing to Mail Stop PCT, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Dated this 17<sup>th</sup> day of October, 2005.

  
Cheryl A. Swanson

Rec'd PCT/PT

17 OCT 2005

Express Mail No.: EV 603557275 US

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IN THE UNITED STATES PATENT  
AND TRADEMARK OFFICE

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Application Number: 10/522,320  
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1. I am an employee of Santangelo Law Offices, P.C., 125 South Howes, Third Floor, Fort Collins, Colorado 80521.
2. I have this day deposited the attached Response to Notification of Missing Requirements Under 35 U.S.C. 371 in the United States Designated/Elected Office along with Exhibits 1-3 with the United States Postal Service as "Express Mail" for mailing to Mail Stop PCT, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Dated this 17<sup>th</sup> day of October, 2005.

  
Cheryl A. Swanson

IN THE UNITED STATES PATENT  
AND TRADEMARK OFFICE

Application Number: 10/522,320  
Filed: January 24, 2005  
Applicants: John L. Schenk and Allison C. Lindsey  
Title: Sperm Cell Process System  
TC/A.U:  
Examiner:  
Attorney Docket: XY-Optimum-NP-US  
Customer No. 33549

**RESPONSE TO NOTIFICATION OF MISSING REQUIREMENTS UNDER 35 U.S.C.  
371 IN THE UNITED STATES DESIGNATED/ELECTED OFFICE**

To: Mail Stop PCT  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Please find enclosed the following documents for filing in response to the "Notification of Missing Requirements Under 35 U.S.C. 371 in the United States Designated/Elected Office (DO-EO0US)" that was mailed on August 17, 2005:

Exhibit 1: a true and correct copy of the following documents filed concurrently this 17<sup>th</sup> day of October, 2005, attention Mail Stop Petitions -- Petition to Accept Patent Application Filing by Other Than All Inventors Under 35 U.S.C. §§116, 118, and 37 C.F.R. §1.47 along with its Exhibits 1-4; Affidavit of Nicole A. Ressue Under 37 C.F.R. §1.47 along with its Exhibits 1-4; a Credit Card Payment Form authorized in the amount of \$200.00 for the Petition fee, Letter of Transmittal; and Certificate of Express Mailing;

Exhibit 2 – an additional copy of the signed Declaration for Patent Application by John L. Schenk – Applicant notes that a fee of \$130.00 had been previously paid for the late Oath or Declaration fee; and

Exhibit 3 – a true and correct copy of the Notification of Missing Requirements Under 35 U.S.C. 371 in the United States Designated/Elected Office (DO-EO0US).

10/21/2005 MKAYPAGH 00000130 10522320

01 FC:1463 200.00 OP

Adjustment date: 12/08/2005 SAHMED1  
10/21/2005 MKAYPAGH 00000130 10522320  
01 FC:1463

-200.00 OP

Refund Ref: 12/08/2005 0030027451  
Credit Card Refund Total: \$200.00  
VISA.....: XXXXXXXXXXXX4327

Respectfully Submitted this 17<sup>th</sup> day of October, 2005.

Respectfully submitted,  
SANTANGELO LAW OFFICES, P.C.

By: Nicole A. Rensue  
Nicole A. Rensue  
Attorney for Assignee  
PTO No. 48,665  
125 South Howes, Third Floor  
Fort Collins, CO 80521  
(970) 224-3100

Adjustment date: 12/08/2005 SAHME1  
10/21/2005 MKAYPAGH 00000130 10522320  
01 FC:1463 -200.00 0P

Express Mail No.: EV 603557284 US

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IN THE UNITED STATES PATENT  
AND TRADEMARK OFFICE

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Filed: January 24, 2005  
Applicants: John L. Schenk and Allison C. Lindsey  
Title: Sperm Cell Process System  
TC/A.U:  
Examiner:  
Attorney Docket: XY-Optimum-NP-US  
Customer No. 33549

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**EXHIBIT 1**

A true and correct copy of the Declaration for Patent Application for the above captioned application signed by inventor John L. Schenk and with a signature page for Allison C. Lindsey

Express Mail No.: EV 603557275 US

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IN THE UNITED STATES PATENT  
AND TRADEMARK OFFICE

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Application Number: 10/522,320  
Filed: January 24, 2005  
Applicants: John L. Schenk and Allison C. Lindsey  
Title: Sperm Cell Process System  
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Examiner:  
Attorney Docket: XY-Optimum-NP-US  
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Title: Sperm Cell Process System  
TC/A.U:  
Examiner:  
Attorney Docket: XY-Optimum-NP-US  
Customer No. 33549

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**EXHIBIT 2**

A true and correct copy of the Assignment of Patent Rights for the above  
captioned application as signed by inventor John L. Schenk

Express Mail No.: EV 603557275 US

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IN THE UNITED STATES PATENT  
AND TRADEMARK OFFICE

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Application Number: 10/522,320  
Filed: January 24, 2005  
Applicants: John L. Schenk and Allison C. Lindsey  
Title: Sperm Cell Process System  
TC/A.U:  
Examiner:  
Attorney Docket: XY-Optimum-NP-US  
Customer No. 33549

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**EXHIBIT 2**

Declaration for Patent Application

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IN THE UNITED STATES PATENT AND  
TRADEMARK OFFICE

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Applicants: John L. Schenk and Allison C. Lindsey  
Application Number: 10/522,320  
Filed: January 24, 2005  
Title: Sperm Cell Process System  
TC/A.U:  
Examiner:

International Application No: PCT/US03/22906, Filed 22 July 2003  
Original US Application: 60/400,486, Filed 22 July 2002

Assignee: XY, Inc.  
Attorney Docket: XY-Optimum-USNP  
Customer No. 33549

**RECEIVED**  
OCT 21 2005  
**OFFICE OF PETITIONS**

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**ASSIGNMENT OF PATENT RIGHTS**

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THIS ASSIGNMENT document is made effective as of the 22<sup>nd</sup> day of July, 2003 (the PCT Filing Date), between and among John L. Schenk, whose residential address is 1906 Constitution Avenue, Fort Collins, CO 80526, US (the "Assignor") and XY, Inc., having its principal office at 1108 North Lemay, Colorado 80524, USA (the "Assignee").

WHEREAS, the Assignor has contributed to some degree in conceiving or developing technology relating to a sperm cell process system including, but not limited to, the technology initially described or indicated in the application identified by the caption listed above, and also including for the purpose of this assignment those improvements which are related to the subject matter of such technology to the extent conceived or developed during the time serving as a consultant or employee of the Assignee, or its subsidiaries, affiliates, or related parties, and to improvements related to such technology which are identified, developed, or conceived using trade secret or confidential information of the Assignee or which are likely to cause disclosure of such trade secret or confidential information (the "Invention");

WHEREAS, the Assignor, either by himself or in conjunction with other individuals, may be an inventor of the Invention;

WHEREAS, the Assignor acknowledges his obligation to assign all right, title and interest in the Invention to Assignee;

WHEREAS, the Assignor desires to formalize his obligation for assignment of all right, title and interest to the Invention to Assignee to the extent he has any such rights worldwide; and

WHEREAS, the Assignor acknowledges his obligation to assign all right, title and interest in any and all patent rights and any other proprietary rights in the Invention, to Assignee;

NOW, THEREFORE, for US \$10.00 or other good and valuable consideration, receipt of which is hereby acknowledged, each of the undersigned hereby agree as follows:

1. The Assignor warrants that:

a. he has the authority to assign all right, title, and interest originated now or hereafter by him involving the Invention;

b. he has conveyed no right, title, or interest in the Invention to any party other than the Assignee;

c. to the extent any Assignor conducted any efforts relevant to the ownership of all rights to the Invention under, on behalf of, or through any entity or assumed name, he has the authority to act as agent for such an entity and to fully transfer such rights; and

d. at the time of signing of this Assignment, he neither knows nor has reason to know of any outstanding right, title, or interest in the Invention inconsistent with a full assignment of rights to the Assignee other than any right, title, or interest which may exist as a result of any other's coinventorship.

2. Assignor, for good and valuable consideration, hereby sells, grants, transfers, authorizes application for, agrees to support, and assigns to the Assignee the entire right, title, and interest in and to the Invention, including, but not limited to:

a. all such worldwide rights to make, use, and sell the Invention;

b. all rights to make, own, and control any applications for United States or foreign patents relating to or based upon the Invention, including, but not limited to: all rights to the above-identified application, all rights to make any claim for any priority to which such applications may be entitled, all rights to any continuing application(s), divisional application(s), substitution application(s), continuation application(s), continuation-in-part application(s); national phase application(s), regional phase application(s), foreign application(s); and all patents which may be granted thereon; and all reissues, extensions, or other related rights related thereto;

c. all related rights involving the Invention in any country such as utility-model registrations, inventor's certificates, and the like, and all rights, titles, and interests involving the Invention under any foreign government;

d. all rights to any documents, notes, and evidence regarding any aspect of the Invention; and

e. all rights to seek protection covering such aspects or claims as the Assignee deems appropriate, specifically, including, but not limited to: claims which seek protection for device, apparatus, method, process, business method, or other coverage; claims which seek protection for as broad a level of coverage as might be desired by the Assignee; claims which address any aspect conceived, developed, or disclosed as separate inventions; claims which address any permutations or combinations of any aspects; claims which address any aspects independent of any initial context considered as preferred embodiments; and claims which seek broad protection in general.

3. The Assignor acknowledges a legal and equitable obligation to assign to the Assignee any and all patent rights and any other proprietary rights related to the Invention to the extent conceived (even if later reduced to practice) or developed while he is an employee or consultant of the Assignee or its subsidiaries, affiliates, or related parties, and covenants that he has not and will not execute any agreement in conflict with this Assignment and will not offer any opinions, or take or assist in taking any actions which might tend to diminish the scope of protection available to the Assignee. Further, the Assignor warrants that other than rights of the Assignee, he maintains the entire right, title, and interest in and to the Invention as may exist by virtue of his contribution and has made no conveyance of any rights whatsoever to any other person. The Assignor also covenants that he will promptly and continuously inform the Assignee of any articles, patents, or other references, or prior art of which he becomes aware which may be material to the assessment of patentability of the Invention.

4. The Assignor further covenants and agrees that he will communicate to the Assignee any facts known to him respecting any improvements involving or in any way related to the Invention, and will testify in any legal proceeding, sign all lawful papers, execute all division, continuation, continuation-in-part, substitute, foreign, or reissue applications, make all rightful oaths, and generally do everything possible to aid the Assignee to obtain and enforce full protection and title in and to said Invention in all countries without further consideration but at the expense of the Assignee.

5. The Assignor acknowledges that pursuant to the sale, grant, transfer, and assignment to the Assignee of the entire right, title, and interest in and to the Invention, as provided in the above paragraphs, this assignment shall be complete as to all rights owned. As such, the Assignor consents to a waiver of any and all access rights to any applications for United States or foreign patents relating to the Invention, and including but not limited to the above-identified application, and to any division, substitution, continuation, continuation-in-part, national phase, or regional phase, of such

applications, all related access rights involving the Invention in any country such as utility-model registrations, inventor's certificates and the like, and all access rights, titles, and interests involving the Invention under any foreign government, to the extent permissible. Access rights may particularly include: any and all rights to any files, documents, notes, or evidence regarding any aspect of the prosecution of the Invention in the United States or foreign countries; any right to obtain, view or copy in any form the files, documents, notes, or evidence related to prosecution history or status of any application for United States or foreign patents relating to the Invention; any other right to obtain information relating to prosecution history, or status of any application for United States, or foreign patents relating to the Invention. The Assignor also further covenants and agrees that he will sign all lawful papers, consents, and generally do everything possible to aid the Assignee in petitioning waiver of access of the Assignor to the United States or foreign patent offices of any and all applications for United States or foreign patents relating to the invention, as provided above.

6. The Assignor grants the firm of Santangelo Law Offices, P.C., the power to insert on this Assignment or any other document any further identification which may be necessary or desirable such as to indicate filing information or to comply with the rules of the United States Patent Office or any foreign patent office for recordation of this document, including, but not limited to, inserting the application number, the execution date, mailing information, or the filing date of the above-identified United States Patent Application.

7. This assignment shall be binding on all parties, their heirs, executors, administrators, successors, or assigns, and may be recorded in the United States Patent and Trademark Office or elsewhere. In the event any provision of this Agreement is found to be unenforceable or to be unreasonable in scope, such provision shall be modified to the extent necessary to make it enforceable, and as so modified, this Agreement shall remain in full force and effect.

8. This Agreement shall be construed and enforced in accordance with the laws and jurisdiction of the State of Colorado or under the federal laws of the United States to the extent they supersede state law. In the event any claim or controversy arises under this agreement or the parties' relationship, the parties agree to submit to exclusive jurisdiction and venue for the resolution of such dispute in the District Court of Larimer County, Colorado, or to the extent necessary in federal court in the District of Colorado, United States of America.

SIGNATURES:

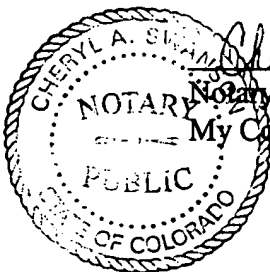
  
John L. Schenk


Date of Assignment Signature: 31 Jan 05  
Date of Execution of Application: 31 Jan 05  
(signing the Declaration)

UNITED STATES OF AMERICA    )  
STATE OF COLORADO            )ss.  
COUNTY OF LARIMER         )

SUBSCRIBED AND SWORN to before me in the County of Larimer, State of Colorado, United States of America, by John L. Schenk, this 31<sup>st</sup> day of January, 2005.

WITNESS my hand and official seal pursuant to the authority vested in me as a Notary Public by the State of Colorado.



  
Notary Public  
My Commission Expires: 8/21/2007

Express Mail No.: EV 603557275 US

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IN THE UNITED STATES PATENT  
AND TRADEMARK OFFICE

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Title: Sperm Cell Process System  
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Examiner:  
Attorney Docket: XY-Optimum-NP-US  
Customer No. 33549

---

**EXHIBIT 3**

A true and correct copy of the Notification of Missing Requirements Under  
35 U.S.C. 371 in the United States Designated/Elected Office (DO-EO0US)



## UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
 United States Patent and Trademark Office  
 Address: COMMISSIONER FOR PATENTS  
 P.O. Box 1450  
 Alexandria, Virginia 22313-1450  
 www.uspto.gov

U.S. APPLICATION NUMBER NO.	FIRST NAMED APPLICANT	ATTY. DOCKET NO.
10/522,320	John L. Schenk	XY-Optimum-USNP

INTERNATIONAL APPLICATION NO.	
PCT/US03/22906	
IA. FILING DATE	PRIORITY DATE
07/22/2003	07/22/2002

33549  
 SANTANGELO LAW OFFICES, P.C.  
 125 SOUTH HOWES, THIRD FLOOR  
 FORT COLLINS, CO 80521

**CONFIRMATION NO. 6962**  
**371 FORMALITIES LETTER**  
**\*OC000000016793182\***  
 \*OC000000016793182\*

Date Mailed: 08/17/2005

### NOTIFICATION OF MISSING REQUIREMENTS UNDER 35 U.S.C. 371 IN THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US)

The following items have been submitted by the applicant or the IB to the United States Patent and Trademark Office as a Designated / Elected Office (37 CFR 1.495).

- Copy of the International Application filed on 01/24/2005
- Copy of the International Search Report filed on 01/24/2005
- Copy of IPE Report filed on 01/24/2005
- Information Disclosure Statements filed on 01/24/2005
- Request for Immediate Examination filed on 01/24/2005
- U.S. Basic National Fees filed on 01/24/2005
- Priority Documents filed on 01/24/2005

The following items **MUST** be furnished within the period set forth below in order to complete the requirements for acceptance under 35 U.S.C. 371:

- Oath or declaration of the inventors, in compliance with 37 CFR 1.497(a) and (b), identifying the application by the International application number and international filing date.

**ALL OF THE ITEMS SET FORTH ABOVE MUST BE SUBMITTED WITHIN TWO (2) MONTHS FROM THE DATE OF THIS NOTICE OR BY 32 MONTHS FROM THE PRIORITY DATE FOR THE APPLICATION, WHICHEVER IS LATER. FAILURE TO PROPERLY RESPOND WILL RESULT IN ABANDONMENT.**

The time period set above may be extended by filing a petition and fee for extension of time under the provisions of 37 CFR 1.136(a).

Applicant is reminded that any communications to the United States Patent and Trademark Office must be mailed to the address given in the heading and include the U.S. application no. shown above (37 CFR 1.5)

*A copy of this notice **MUST** be returned with the response.*

SHAKEEL AHMED

Telephone: (703) 308-9140 EXT 208

PART 1 - ATTORNEY/APPLICANT COPY

U.S. APPLICATION NUMBER NO.	INTERNATIONAL APPLICATION NO.	ATTY. DOCKET NO.
10/522,320	PCT/US03/22906	XY-Optimum-USNP

FORM PCT/DO/EO/905 (371 Formalities Notice)

Express Mail No.: EV 603557284 US

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IN THE UNITED STATES PATENT  
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Examiner:  
Attorney Docket: XY-Optimum-NP-US  
Customer No. 33549

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**EXHIBIT 3**

A true and correct copy of the Declaration for Patent Application as executed by both inventors for the priority case: provisional application Serial Number 60/400,486.

Express Mail No: EV084448612US  
Attorney Docket: XY OptimumProv

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IN THE UNITED STATES PATENT AND  
TRADEMARK OFFICE

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In Re the Provisional Application of: Allison C. Lindsey, John Schenk

Serial Number:

Filed:

For: SPERM CELL PROCESS SYSTEM

Assignee: XY, Inc.

**RECEIVED**

OCT 21 2005

**OFFICE OF PETITIONS**

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DECLARATION FOR PATENT APPLICATION

This Declaration is made by Allison C. Lindsey and John Schenk.

I, Allison C. Lindsey, hereby declare:

- I am a citizen of the United States of America and that my residence and mailing address is 236 North Overland Drive, Fort Collins, CO 80521.

I, John Schenk, hereby declare:

- I am a citizen of the United States of America and that my residence and mailing address is 1906 Constitution, Fort Collins, CO 80526.

We, Allison C. Lindsey and John Schenk hereby declare:

We believe that we are the original, first, and joint inventors of the subject matter which is claimed, described and for which a patent is sought on the invention entitled "SPERM CELL PROCESS SYSTEM" the specification of which has been provided to us at or prior to the time of signing this declaration, and of which we hereby claim the benefit of and priority pursuant to 35 USC §§119, 120, or 365; there are no foreign applications having a filing date before that of the application(s) on which priority is claimed; and, if applicable, we have identified in the request of this application, in compliance with PCT Rule 4.10, any claim to foreign priority and we have identified above by application number, country or Member of the World Trade Organization, day, month and year of filing, any application for a patent or inventor's certificate filed in a country other than the United

States of America, including any PCT international application designating at least one country other than the United States of America, having a filing date before that of the application on which foreign priority is claimed.

We hereby declare that the above specification is intended to include disclosure or claims directed to individually or in combination: embodiments of the invention which may encompass a device, apparatus, method, process, or business method; embodiments of the invention which may encompass permutations or combinations of any aspects of the invention; any aspect of the invention conceived or developed as separate inventions; and any aspect of the invention independent of any initial context considered as preferred embodiments. We also authorize and support this application for patent protection in the United States, and for similar protection in foreign countries, each to be sought to the extent or breadth any owner desires or deems appropriate. We acknowledge that each of the attorneys and the firm filing this application are attorneys for the assignee XY, Inc. only.

We hereby state that we have reviewed and understand the contents of the specification entitled "Sperm Cell Process System", including any claims.

We acknowledge the duty to disclose information which is material to the examination of this application in accordance with Title 37, Code of Federal Regulations, Section 1.56(a).

We hereby declare that all statements made herein of our own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Date: 8/16/02

Allison C. Lindsey  
Allison C. Lindsey

UNITED STATES OF AMERICA     )  
STATE OF COLORADO            )ss.  
COUNTY OF LARIMER            )

SUBSCRIBED AND SWORN to before me in the County of Larimer, State of Colorado, United States of America, by Allison C. Lindsey, this 16<sup>th</sup> day of August, 2002.

WITNESS my hand and official seal pursuant to the authority vested in me as a Notary Public by the State of Colorado.



My Commission Expires 10/23/2005

Laura Oleson  
Notary Public  
My Commission Expires: 10/23/2005

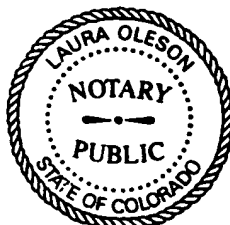
Date: 16 Aug 02

John Schenk  
John Schenk

UNITED STATES OF AMERICA     )  
STATE OF COLORADO            )ss.  
COUNTY OF LARIMER            )

SUBSCRIBED AND SWORN to before me in the County of Larimer, State of Colorado, United States of America, by John Schenk, this 16<sup>th</sup> day of August, 2002.

WITNESS my hand and official seal pursuant to the authority vested in me as a Notary Public by the State of Colorado.



My Commission Expires 10/23/2005

Laura Oleson  
Notary Public  
My Commission Expires: 10/23/2005

provis-decl

Express Mail No.: EV 603557284 US

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IN THE UNITED STATES PATENT  
AND TRADEMARK OFFICE

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Application Number: 10/522,320  
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Title: Sperm Cell Process System  
TC/A.U:  
Examiner:  
Attorney Docket: XY-Optimum-NP-US  
Customer No. 33549

---

**EXHIBIT 4**

A true and correct copy of the Assignment of Patent Right including the Notice of Recordation as executed by both inventors for the priority case: provisional application Serial Number 60/400,486



NOVEMBER 01, 2002

PTAS

Under Secretary of Commerce For Intellectual Property and  
Director of the United States Patent and Trademark Office  
Washington, DC 20231  
www.uspto.gov

SANTANGELO LAW OFFICES, P.C.  
CRAIG R. MILES  
125 SOUTH HOWES, 3RD FLOOR  
FORT COLLINS, COLORADO 80521



\*102202697A\*

UNITED STATES PATENT AND TRADEMARK OFFICE  
NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT

THE ENCLOSED DOCUMENT HAS BEEN RECORDED BY THE ASSIGNMENT DIVISION OF THE U.S. PATENT AND TRADEMARK OFFICE. A COMPLETE MICROFILM COPY IS AVAILABLE AT THE ASSIGNMENT SEARCH ROOM ON THE REEL AND FRAME NUMBER REFERENCED BELOW.

PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE EMPLOYEE WHOSE NAME APPEARS ON THIS NOTICE AT 703-308-9723. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, ASSIGNMENT DIVISION, BOX ASSIGNMENTS, CG-4, 1213 JEFFERSON DAVIS HWY, SUITE 320, WASHINGTON, D.C. 20231.

RECORDATION DATE: 08/21/2002

REEL/FRAME: 013213/0261  
NUMBER OF PAGES: 6

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:  
LINDSEY, ALLISON C.

DOC DATE: 08/16/2002

ASSIGNOR:  
SCHENK, JOHN

DOC DATE: 08/16/2002

ASSIGNEE:  
XY, INC.  
1108 NORTH LEMAY AVENUE  
FORT COLLINS, COLORADO 80524

SERIAL NUMBER: 60400486  
PATENT NUMBER:

FILING DATE: 07/22/2002  
ISSUE DATE:

**RECEIVED**  
OCT 21 2005  
OFFICE OF PETITIONS

MARY BENTON, EXAMINER  
ASSIGNMENT DIVISION  
OFFICE OF PUBLIC RECORDS

Express Mail No: EV084448612US  
*Attorney Docket:* XY OptimumProv

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IN THE UNITED STATES PATENT AND  
TRADEMARK OFFICE

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In Re the Provisional Application of: Allison C. Lindsey, John Schenk

Serial Number:

Filed:

For: SPERM CELL PROCESS SYSTEM

Assignee: XY, Inc.

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ASSIGNMENT OF PATENT RIGHTS

THIS ASSIGNMENT document is between and among Allison C. Lindsey, whose address is: 236 North Overland Drive, Fort Collins, Colorado, 80521, and John Schenk, whose address is 1906 Constitution, Fort Collins, CO 80526. (individually and collectively the "Assignor(s)") and XY, Inc., having its principal office at: 1108 North Lemay Avenue, Fort Collins, Colorado, 80524 (the "Assignee").

WHEREAS, the Assignor(s) have contributed to some degree in conceiving or developing technology relating to a sperm cell process system, including, but not limited to, the technology described or indicated in the application identified by the caption listed above, and also including for the purpose of this assignment those improvements which are related to the subject matter of such technology to the extent conceived or developed during the time serving as a consultant or employee of the Assignee, and improvements related to such technology which are identified, developed, or conceived using trade secret or confidential information of the Assignee or which are likely to cause disclosure of such trade secret or confidential information (the "Invention");

WHEREAS, the Assignor(s), either by himself/herself or in conjunction with other individuals, may be an inventor of the Invention;

WHEREAS, the Assignor(s) acknowledges their obligation to assign all right, title and interest in the Invention to Assignee;

WHEREAS, the Assignor(s) desires to formalize his/her obligation for assignment of all right, title and interest to the Invention to Assignee to the extent she has any such rights worldwide; and

WHEREAS, the Assignor(s) acknowledges his/her obligation to assign all right, title and interest in any and all patent rights and any other proprietary rights related to the business of the Assignee, and in particular the Invention, to Assignee;

NOW, THEREFORE, for US \$10.00 or other good and valuable consideration, receipt of which is hereby acknowledged, the undersigned hereby agrees as follows:

1. The Assignor(s) warrant that:
  - a. he/she has the authority to assign all right, title, and interest originated now or hereafter by his/her involvement in the Invention;
  - b. he/she has conveyed no right, title, or interest in the Invention to any party other than the Assignee;
  - c. to the extent the individual Assignor(s) conducted any efforts relevant to the ownership of all rights to the Invention under, on behalf of, or through any entity or assumed name, he/she has the authority to act as agent for such an entity and to fully transfer such rights; and
  - d. at the time of signing of this Assignment, he/she neither knows nor has reason to know of any outstanding right, title, or interest in the Invention inconsistent with a full assignment of rights to the Assignee other than any right, title, or interest which may exist as a result of any coinventorship.
2. The Assignor(s), for good and valuable consideration, hereby sells, grants, transfers, authorizes application for, agrees to support, and assigns to the Assignee the entire right, title, and interest in and to the Invention, including, but not limited to:
  - a. all such worldwide rights to make, use, and sell the Invention;
  - b. any applications for United States or foreign patents relating to the Invention, and specifically to the above-identified application, and to make a claim for any priority to which such applications are entitled, and to any division, substitution, continuation, or continuation-in-part, of such applications, all patents which may be granted thereon, and all reissues, and extensions thereof;
  - c. the right to file applications for United States or foreign patents based upon the Invention, and to make a claim for any priority to which such applications are entitled, and to any division, substitution, continuation, or continuation-in-part, of such applications, all patents which may be granted thereon, and all reissues and extensions thereof;
  - d. all related rights involving the Invention in any country such as utility-model

registrations, inventor's certificates, and the like, and all rights, titles, and interests involving the Invention under any foreign government;

e. all rights to any documents, notes, and evidence regarding any aspect of the Invention; and

f. all rights to seek protection covering such aspects or claims as the Assignee deems appropriate, specifically, including, but not limited to: claims which seek protection for device, apparatus, method, process, business method, or other coverage; claims which seek protection for as broad a level of coverage as might be desired by the Assignee; claims which address any aspect conceived, developed, or disclosed as separate inventions; claims which address any permutations or combinations of any aspects; claims which address any aspects independent of any initial context considered as preferred embodiments; and claims which seek broad protection in general.

3. The Assignor(s) acknowledge a legal and equitable obligation to assign to the Assignee any and all patent rights and any other proprietary rights related to the business of the Assignee to the extent conceived or developed while he/she is an employee of the Company and covenants that he/she has not and will not execute any agreement in conflict with this Assignment and will not offer any opinions, or take or assist in taking any actions which might tend to diminish the scope of protection available to the Assignee for the Invention. Further, each Assignor warrants that other than rights of the Assignee he/she maintains the entire right, title, and interest in and to the Invention as may exist by virtue of his/her contribution and has made no conveyance of any rights whatsoever to any other person. The Assignor(s) also covenant that he/she will promptly and continuously inform the Assignee of any articles, patents, or other references, or prior art of which he/she becomes aware which may be material to the assessment of patentability of the Invention.

4. The Assignor(s) further covenant and agree that he/she will communicate to the Assignee any facts known to him/her respecting any improvements involving or in any way related to the Invention, and will testify in any legal proceeding, sign all lawful papers, execute all division, continuation, continuation-in-part, substitute, foreign, or reissue applications, make all rightful oaths, and generally do everything possible to aid the Assignee to obtain and enforce full protection and title in and to said Invention and to such improvements in all countries without further consideration but at the expense of the Assignee.

5. The Assignor(s) acknowledge that pursuant to the sale, grant, transfer, and assignment to the Assignee of the entire right, title, and interest in and to the Invention, as provided in the above paragraphs, this assignment shall be complete as to all rights owned. As such, the Assignor(s) consent to a waiver of any and all access rights to any applications for United States or foreign patents relating to the Invention, and including but not limited to the above-identified application, and to any division, substitution, continuation, or continuation-in-part, of such applications, all related access rights involving the Invention in any country such as utility-model registrations, inventor's certificates and the like, and all access rights, titles, and interests involving the Invention under any foreign government, to the extent permissible. Access rights may particularly include: any and all rights to any files, documents, notes, or evidence regarding any aspect of the prosecution of the Invention in the United States or foreign countries; any right to obtain, view or copy in any form the files, documents, notes, or evidence related to prosecution history or status of any application for United States or foreign patents relating to the Invention; any other right to obtain information relating to prosecution history, or status of any application for United States, or foreign patents relating to the Invention.

6. The Assignor(s) further covenant and agree that he/she will sign all lawful papers, consents, and generally do everything possible to aid the Assignee in petitioning waiver of access of the Assignor to the United States or foreign patent offices of any and all applications for United States or foreign patents relating to the invention, as provided above.

7. The Assignor(s) grant the firm of Santangelo Law Offices, P.C., the power to insert on this Assignment any further identification which may be necessary or desirable in order to comply with the rules of the United States Patent Office or any foreign patent office for recordation of this document, including, but not limited to, inserting the application number, the execution date, or the filing date of the above-identified United States Patent Application based upon the Invention.

8. This assignment shall be binding on all parties, their heirs, executors, administrators, successors, or assigns, and may be recorded in the United States Patent and Trademark Office or elsewhere. In the event any provision of this Agreement is found to be unenforceable or to be unreasonable in scope, such provision shall be modified to the extent necessary to make it enforceable, and as so modified, this Agreement shall remain in full force and effect.

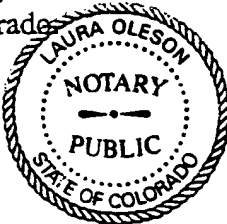
SIGNATURES:

Allison C. Lindsey  
Allison C. Lindsey

Date of Assignment Signature: 22 Jul 02  
Date of Execution of Application: 16 Aug 02  
(signing the Declaration)

UNITED STATES OF AMERICA )  
STATE OF COLORADO )  
COUNTY OF LARIMER )

SUBSCRIBED AND AFFIRMED OR SWORN to before me in the County of Larimer, State of Colorado, United States of America, by Allison C. Lindsey, this 16<sup>th</sup> day of August, 2002. WITNESS my hand and official seal pursuant to the authority vested in me as a Notary Public by the State of Colorado.



Laura Oleson  
Notary Public  
My Commission Expires: 10/23/2005

John Schenk  
John Schenk  
My Commission Expires 10/23/2005

Date of Assignment Signature: 22 Jul 02  
Date of Execution of Application: 16 Aug 02  
(signing the Declaration)

UNITED STATES OF AMERICA )  
STATE OF COLORADO )  
COUNTY OF LARIMER )

SUBSCRIBED AND AFFIRMED OR SWORN to before me in the County of Larimer, State of Colorado, United States of America, by John Schenk, this 16<sup>th</sup> day of August, 2002. WITNESS my hand and official seal pursuant to the authority vested in me as a Notary Public by the State of Colorado.



My Commission Expires 10/23/2005

Laura Oleson  
Notary Public  
My Commission Expires: 10/23/2005

prov-assign

Express Mail No.: EV 603557284 US

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IN THE UNITED STATES PATENT  
AND TRADEMARK OFFICE

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Application Number: 10/522,320  
Filed: January 24, 2005  
Applicants: John L. Schenk and Allison C. Lindsey  
Title: Sperm Cell Process System  
TC/A.U:  
Examiner:  
Attorney Docket: XY-Optimum-NP-US  
Customer No. 33549

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**EXHIBIT 4**

A true and correct copy of the Assignment of Patent Right including the Notice of Recordation as executed by both inventors for the priority case: provisional application Serial Number 60/400,486

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IN THE UNITED STATES PATENT AND  
TRADEMARK OFFICE

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Applicants: John L. Schenk and Allison C. Lindsey  
Application Number:  
Filed:  
Title: Sperm Cell Process System  
TC/A.U:  
Examiner:

International Application No: PCT/US03/22906, Filed 22 July 2003  
Original US Application: 60/400,486, Filed 22 July 2002

Assignee: XY, Inc.  
Attorney Docket: XY-Optimum-USNP  
Customer No. 33549

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**DECLARATION FOR PATENT APPLICATION**

This Declaration is made by John L. Schenk and Allison C. Lindsey.

I, John L. Schenk, hereby declare:

- I am a citizen of the US and that my residence and mailing address is 1906 Constitution Avenue, Fort Collins, CO 80526, US.

I, Allison C. Lindsey, hereby declare:

- I am a citizen of the US and that my residence and mailing address is 236 N. Overland Trail, Fort Collins, CO 80521, US.

We, John L. Schenk and Allison C. Lindsey, each hereby declare, we are the original, first, and joint inventors of the subject matter which is claimed, described and for which a patent is sought on the invention now entitled "Sperm Cell Process System" the specification of which has been provided to us at or prior to the time of signing this declaration. We have reviewed and understand the contents of this specification as above entitled, including any claims.

We also believe we are the original, first, and joint inventors of the subject matter which is claimed and for which a patent is sought in:

- International Application Number PCT/US03/22906 filed July 22, 2003 entitled "Sperm

- Cell Process System”; and
- United States Provisional Application Number 60/400,486 filed July 22, 2002, entitled “Sperm Cell Process System”.

We hereby claim the benefit under Title 35, United States Code §119 of US Provisional Application 60/400,486 filed July 22, 2002; there are no foreign applications having a filing date before that of the application on which priority is claimed.

We hereby claim the benefit under Title 35, United States Code §365 of PCT International Application Number PCT/US03/22906 filed July 22, 2003. To the extent applicable, we have identified in the request of this application, in compliance with PCT Rule 4.10, any claim to foreign priority and we have identified above by application number, country or Member of the World Trade Organization, day, month and year of filing, any application for a patent or inventor’s certificate filed in a country other than the United States of America, including any PCT international application designating at least one country other than the United States of America, having a filing date before that of the application on which foreign priority is claimed.

We hereby declare that the specification and disclosure herein submitted are intended to include disclosure or claims directed to, individually or in combination: embodiments of the invention which may encompass a device, apparatus, method, process, or business method; embodiments of the invention which may encompass permutations or combinations of any aspects of the invention; any aspect of the invention conceived or developed as separate inventions; and any aspect of the invention independent of any initial context considered as preferred embodiments. We also authorize and support this application for patent protection in the United States, and for similar protection in foreign countries, each to be sought to the extent or breadth any owner desires or deems appropriate. We acknowledge that each of the attorneys and the firm filing this application is/are attorneys for the assignee, XY, Inc. only.

We acknowledge the duty to disclose information which is material to the examination of any US application in accordance with Title 37, Code of Federal Regulations, Section 1.56(a).

We hereby declare that all statements made herein of our own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of any US application or any US patent issued thereon.

We hereby grant the firm of Santangelo Law Offices, P.C., the power to insert on this Declaration or any other document any further identification which may be necessary or desirable in order to indicate filing information or to comply with the rules of the United States Patent Office or any foreign patent office for recordation of this document, including, but not limited to, inserting the

application number, the execution date, mailing information, or the filing date of any application based upon the Invention.

Date:

31 Jan 05

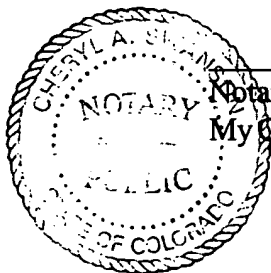
John L. Schenk  
John L. Schenk

UNITED STATES OF AMERICA  
STATE OF COLORADO  
COUNTY OF LARIMER

)  
)ss.  
)

SUBSCRIBED AND SWORN to before me in the County of Larimer, State of Colorado, United States of America, by John L. Schenk, this 31<sup>st</sup> day of January, 2005.

WITNESS my hand and official seal pursuant to the authority vested in me as a Notary Public by the State of Colorado.



Cheryl A. Swanson  
Notary Public

My Commission Expires: 8/21/2007

Date: \_\_\_\_\_

\_\_\_\_\_  
Allison C. Lindsey

UNITED STATES OF AMERICA     )  
STATE OF COLORADO            )ss.  
COUNTY OF LARIMER           )

SUBSCRIBED AND SWORN to before me in the County of Larimer, State of Colorado,  
United States of America, by Allison C. Lindsey, this \_\_\_\_ day of January, 2005.

WITNESS my hand and official seal pursuant to the authority vested in me as a Notary Public  
by the State of Colorado.

\_\_\_\_\_  
Notary Public  
My Commission Expires: \_\_\_\_\_